

U S WEST, Inc.  
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Washington, DC 20036  
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0034

**USWEST**

**Kenneth T. Cartmell**  
Executive Director - Federal Regulatory

April 10, 2000

Mr. Dale Hatfield  
Chief, Office of Engineering and Technology  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, Room 7-C155  
Washington, DC 20554

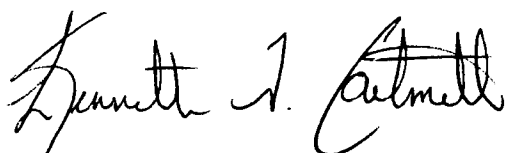
RE: CFR 46, Section 63.100  
Final Service Disruption Report, Vancouver, WA  
VANCWA01DS0

Dear Mr. Hatfield:

On March 10, 2000, U S WEST Communications (USWC) experienced a Service outage in Vancouver, Washington. In accordance with the reporting rules, enclosed is USWC's Final Service Disruption Report for this outage.

Please contact me if you have questions concerning this report.

Sincerely,



Attachments

cc: Mr. Robert Kimball  
Mr. Stagg Newman

# Final Service Disruption Report

**Reporting Company:** U S WEST

**Location of Disruption:** Vancouver, WA VANCWA01DS0

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**1. Date and Time of Incident:**

March 10, 2000 at 2220 PST.

**2. Geographic Area Affected:**

Vancouver, Washington was affected.

**3. Estimated Number of Customers Affected:**

Approximately 53,000 U S WEST customers were affected by the outage.

**4A. Types of Services Affected:**

InterLATA, IntraLATA- Interoffice, and toll services were affected.

**4B. 911 Service Affected:**

911 Service was not affected.

**5. Duration of Outage:**

Service was restored at 2250 PST for a total duration of 30 minutes.

**6. Estimated Number of Blocked Calls:**

There were approximately 5,300 blocked calls.

**7A. Root Cause of the Incident:**

- The root cause of the incident was the absence of a software feature in the switch. Lucent software failed to enable this feature. The failure occurred during a scheduled retrofit operation.

**7B. Name and Type of Equipment:**

Lucent Technologies 5 ESS

**7C. Specific Part of Network Affected:**

Central Office Signaling.

**8. Method(s) Used to Restore Service:**

The software feature, which was not enabled in the configuration of the switch, caused an SS7 isolation during the retrofit process; however, the automatic completion of the retrofit process restored all service.

#### 9. Steps Taken to Prevent Recurrence of Outage:

The following steps have been or will be taken to prevent recurrence of the outage:

U S WEST is currently performing 5E14 retro fits on all Lucent Technologies 5ESSs. During these processes, several Central Offices have experienced longer than normal SS7 isolations.

- ◆ U S WEST had been working with Lucent to identify the source of the problem, but the difficulty was, previously, not defined.
- ◆ Bell Atlantic had experienced the same problem and found the cause to be unimplemented software, Transparent Feature I.D. 694. This feature deals specifically with minimizing the outage times for SS7 A Links during the retrofit process.
- ◆ U S WEST has enabled this software in every 5ESS in the network and is working with Lucent to ensure that all office tapes sent by Lucent will reflect the enabling of the feature.
- ◆ U S WEST has requested that Lucent provide a current and accurate list of additional features that may need to be enabled to enhance performance of all 5ESSs in the network.
- ◆ The Lucent SUMS Center, with responsibility for retrofit activity has agreed to monitor the progress of future generic retrofits to ensure minimal down time.

#### 10A. Applicable Best Practice(s):

U S WEST reviewed Network Reliability: A Report to the Nation, June 1993 and evaluated all recommendations and best practices by focus area. Based on the root cause analysis, the most appropriate focus areas are:

##### Section B - Signaling Network Systems

Reference 6.1.1 - Root Cause Analysis

##### Section C Software and Switching System Reliability

Reference 5.1.3 MOP for all hardware and generic software growth and change activities

Reference 5.3.1 Hardware/Software Outage and Cause Analysis

**10B. Best Practice(s) Used:**

Section B - Signaling Network Systems

Reference 6.1.1 - Root Cause Analysis

Section C Software and Switching System Reliability

Reference 5.1.3 MOP for all hardware and generic software growth and change activities

Reference 5.3.1 Hardware/Software Outage and Cause Analysis

**10C. Analysis of Effectiveness of Best Practice(s):**

Section B - Signaling Network Systems

Reference 6.1.1 - Root Cause Analysis

This recommendation is specific to Signaling Networks; however, U S WEST currently requires a root cause analysis on all significant network failures.

Section C Software and Switching System Reliability

Reference 5.1.3 MOP for all hardware and generic software growth and change activities

This practice requires the preparation of a written Method of Procedure (MOP) for all hardware and generic software growth and change activities. U S WEST requires such MOPs. In this event, the MOP did not address the software action required.

Reference 5.3.1 Hardware/Software Outage and Cause Analysis

This practice recommends cause analysis for hardware/software failures. U S WEST fully supports this practice. U S WEST has a formal root cause analysis process that investigates the cause of the outage and recommends corrective action. In addition, U S WEST has processes in place to analyze hardware/software failures and work with equipment suppliers, as necessary. U S WEST also requires suppliers to provide root cause analysis reports for events where the supplier participates in the analysis and resolution processes.

Kenneth Cartmell, Executive Director – Federal Regulatory  
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Telephone (202) 429-3136

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## FCC INITIAL REPORT

U S WEST - Large Scale Abnormal Condition Report (LSACR)  
Service Disruption Report

[X] 120 MINUTE REPORT [ ] 3 DAY REPORT

ACR #: WA.000310.015Date Of Incident: 3/10/00 Time Of Incident: 22:20:28 PSTGeographic Area Directly Affected: VANCOUVER, WASH  
[Cities, LATA(s), States(s)]CLLI code(s) for affected area: VANCWA01DSOEstimated Number of Customers Affected: 52969  
[i.e. Access lines in the switch, LATA(s) or States(s)]Types of Services Affected (e.g. Local, Toll, 800, 911, FAA, etc.): Local, Toll, 800  
911Duration of Outage(Hours & Minutes): 30 minEstimated Number of Blocked Calls: 5278Apparent Cause of Incident: Planned maintenance-generic loadMethod Used to Restore Service: UNKNOWNSteps Taken to Prevent Recurrence: UNKNOWNCONTACT PERSON: Kenneth Cartmell-Exec. Dir-Fed Regulatory Ph: 202-429-3136  
U S WEST  
1020 19th Street NW Suite 700, Washington, D. C. 20036

-or-

Tim Mason  
Vice President - NROC  
Ph: (303) 707-5100  
U S WEST  
700 W. Mineral, Littleton, CO 80120Dave Rygh  
Director - Network Management Center  
Ph: 303-707-5608  
U S WEST  
700 W. Mineral, Littleton, co 80120Date Reported to FCC: 3/11/00Time Reported to FCC: 1245 MST  
(Include AM/PM, Time Zone)Person Faxing Report: M. Warren

Time Confirmed with FCC: \_\_\_\_\_

Telephone Number: 303-707-6877

FCC Contact Name: \_\_\_\_\_

**PRI FAX: Monitoring Watch Officer (202) 418-2812-Confirm at (202) 632-6975**

Secondary FAX: Monitoring Watch Officer (301) 725-2521 - Confirm at (301) 725-2278

(To be used only at the direction of the Primary Fax Monitoring Watch Officer)

Also FAX to: U S WEST Federal Relations Office at (202) 296-5157

Also FAX to: Karen Eccli/Jane Quigley (303) 707-2229

Also FAX to: Glenda Weibel (206) 345-2129

Also FAX to: Bev Sharpe (303) 694-1719